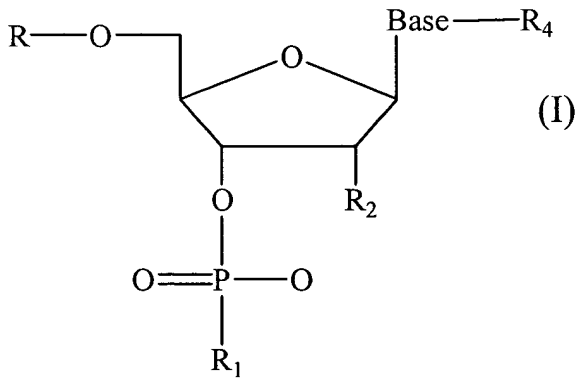
In the claims:

Please amend the claims as shown below by deleting the material indicated by strike-through and adding the underlined material. This listing of claims will replace all prior versions and listings of claims in this application.

1 (currently amended). An antibody that specifically binds to a synthetic oligonucleotide having an organic protecting group covalently bound thereto, which antibody does not bind to said synthetic oligonucleotide when said organic protecting group is not covalently bound thereto;

wherein said oligonucleotide contains a protected nucleotide according to Formula (I):



(I)

wherein:

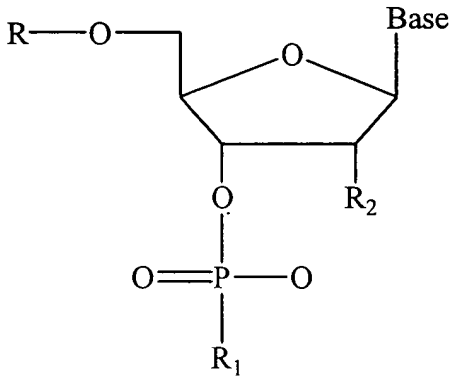
(i) said protected nucleotide of Formula I is a 3' nucleotide; R is a covalent bond to an adjacent nucleotide; R_1 is a protecting group; R_2 is H or –OH; R_4 is absent; and Base is a purine or pyrimidine base; or

(ii) R is a covalent bond to an adjacent nucleotide; R_1 is a covalent bond to an adjacent nucleotide; R_2 is $–OR_3$; R_3 a protecting group; R_4 is absent; and Base is a purine or pyrimidine base; or

(iii) R is a covalent bond to an adjacent nucleotide; R_1 is a covalent bond to an adjacent nucleotide; R_2 is H or –OH; Base is a purine or pyrimidine base; and R_4 is a protecting group bonded to an amino group of said base.

2-3 (cancelled).

4 (previously presented). The antibody according to claim 1, wherein said oligonucleotide consists of from 3 to 20 nucleotides and has a 3' nucleotide, and wherein said 3' nucleotide is a protected nucleotide according to Formula (I):



(I)

wherein:

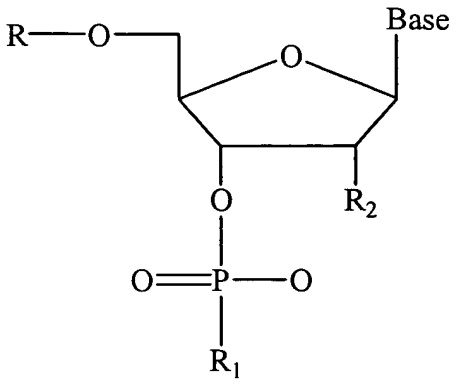
R is a covalent bond to an adjacent nucleotide;

R_1 is a protecting group;

R_2 is H or –OH; and

Base is a purine or pyrimidine base.

5 (previously presented). The antibody according to claim 1, wherein said oligonucleotide consists of from 3 to 20 nucleotides, and wherein one of said nucleotides is a protected nucleotide according to Formula (I):



(I)

wherein:

R is a covalent bond to an adjacent nucleotide;

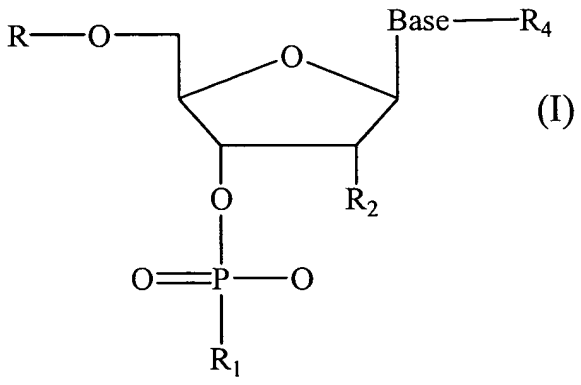
R_1 is a covalent bond to an adjacent nucleotide;

R_2 is $-OR_3$;

R_3 a protecting group; and

Base is a purine or pyrimidine base.

6 (previously presented). The antibody according to claim 1, wherein said oligonucleotide consists of from 3 to 20 nucleotides, and wherein one of said nucleotides is a protected nucleotide according to Formula (I):



(I)

wherein:

R is a covalent bond to an adjacent nucleotide;

R_1 is a covalent bond to an adjacent nucleotide;

R_2 is H or –OH;

Base is a purine or pyrimidine base; and

R_4 is a protecting group bonded to an amino group of said base.

7 (previously presented). The antibody according to claim 1, wherein said oligonucleotide consists of from 3 to 20 nucleotides, and wherein one of said nucleotides is a protected with a photolabile protecting group.

8 (previously presented). The antibody according to claim 1, which antibody is a polyclonal antibody.

9 (previously presented). The antibody according to claim 1, which antibody is a monoclonal antibody.

10 (previously presented). The antibody according to claim 1 immobilized on a solid support.

11 (previously presented). An isolated cell that expresses an antibody according to claim 9.

12 (previously presented). The cell according to claim 11, which cell is a hybridoma.

13 (cancelled).

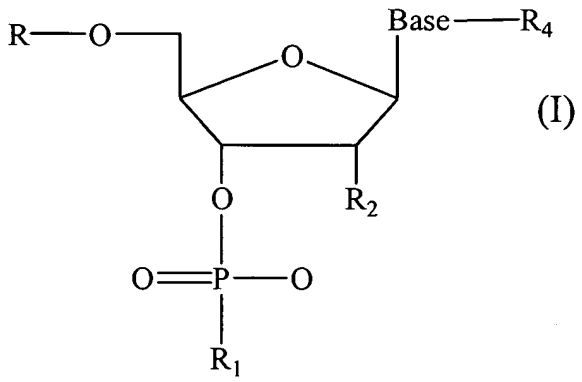
14. (previously presented). A method for detecting incomplete deprotection of a synthetic oligonucleotide by immunoassay, said immunoassay comprising the steps of:

contacting a synthetic oligonucleotide to an antibody, wherein said synthetic oligonucleotide is produced by the process of protecting and then deprotecting a precursor molecule thereof, and wherein said antibody specifically binds to a synthetic

oligonucleotide having an organic protecting group covalently bound thereto, which antibody does not bind to said synthetic oligonucleotide when said organic protecting group is not covalently bound thereto; and then

detecting the presence or absence of binding of said antibody to said synthetic oligonucleotide, wherein said antibody is labeled, the presence of binding indicating incomplete deprotection of said synthetic oligonucleotide;

wherein said oligonucleotide contains a protected nucleotide according to Formula (I):



(I)

wherein:

(i) said protected nucleotide of Formula I is a 3' nucleotide; R is a covalent bond to an adjacent nucleotide; R_1 is a protecting group; R_2 is H or –OH; R_4 is absent; and Base is a purine or pyrimidine base; or

(ii) R is a covalent bond to an adjacent nucleotide; R_1 is a covalent bond to an adjacent nucleotide; R_2 is $-OR_3$; R_3 a protecting group; R_4 is absent; and Base is a purine or pyrimidine base; or

(iii) R is a covalent bond to an adjacent nucleotide; R_1 is a covalent bond to an adjacent nucleotide; R_2 is H or –OH; Base is a purine or pyrimidine base; and R_4 is a protecting group bonded to an amino group of said base.

15. (previously presented) The method according to claim 14, wherein said immunoassay is a heterogeneous immunoassay.

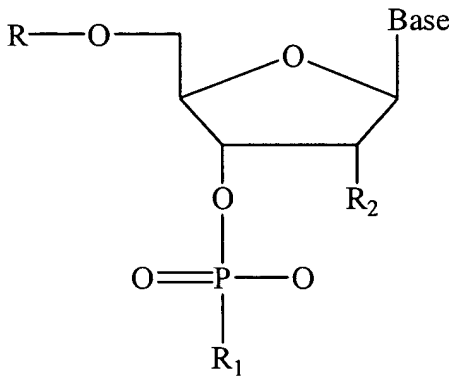
16. (previously presented) The method according to claim 14, wherein said immunoassay is a homogeneous immunoassay.

17. (previously presented) The method according to claim 14, wherein said immunoassay is a sandwich assay.

18. (previously presented) The method according to claim 14, wherein said oligonucleotide is immobilized on a solid support.

Claims 19-57 (cancelled).

58. (currently amended) The method according to claim 14, wherein said antibody binds to a synthetic oligonucleotide consisting of from 3 to 20 nucleotides and having a 3' nucleotide, and wherein said 3' nucleotide is a protected nucleotide according to Formula (I):



(I)

wherein:

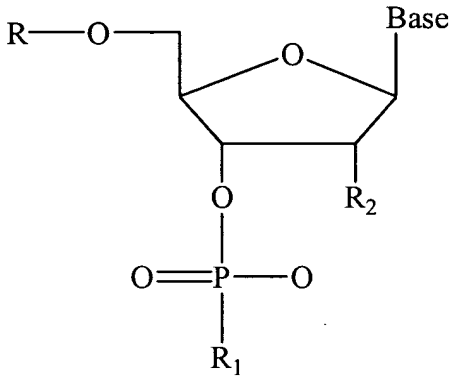
R is a covalent bond to an adjacent nucleotide;

R_1 is a protecting group;

R_2 is H or –OH; and

Base is a purine or pyrimidine base.

59. (previously presented) The method according to claim 14, wherein said antibody binds to a synthetic oligonucleotide consisting of from 3 to 20 nucleotides, and wherein one of said nucleotides is a protected nucleotide according to Formula (I):



(I)

wherein:

R is a covalent bond to an adjacent nucleotide;

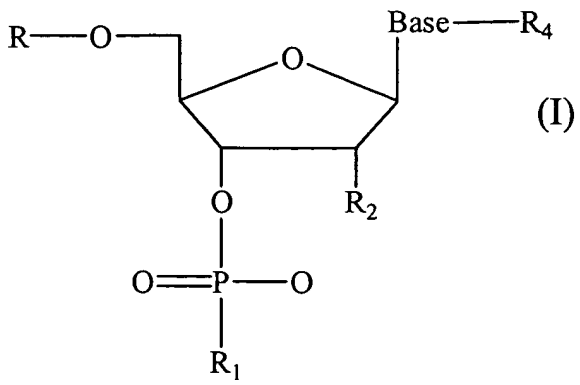
R_1 is a covalent bond to an adjacent nucleotide;

R_2 is $-OR_3$;

R_3 a protecting group; and

Base is a purine or pyrimidine base.

60. (previously presented) The method according to claim 14, wherein said antibody binds to a synthetic oligonucleotide consisting of from 3 to 20 nucleotides, and wherein one of said nucleotides is a protected nucleotide according to Formula (I):



(I)

wherein:

R is a covalent bond to an adjacent nucleotide;

R_1 is a covalent bond to an adjacent nucleotide;

R_2 is H or –OH;

Base is a purine or pyrimidine base; and

R_4 is a protecting group bonded to an amino group of said base.

61. (previously presented) The method according to claim 14, wherein said antibody binds to a synthetic oligonucleotide consisting of from 3 to 20 nucleotides, and wherein one of said nucleotides is a protected with photolabile protecting group.

62. (previously presented) The method according to claim 14, wherein said antibody is a polyclonal antibody.

63. (previously presented) The method according to claim 14, wherein said antibody is a monoclonal antibody.